

WE CLAIM:

1 1. An antimicrobial medical article prepared by treating a polymeric
2 medical article, for an effective period of time, with a solution consisting essentially of
3 one or more solvents and a mixture of chlorhexidine free base and a water-soluble
4 chlorhexidine salt, wherein the weight/weight ratio of chlorhexidine free base and the
5 water-soluble chlorhexidine salt in the solution is between 1:1 to 1:5.

1 2. The antimicrobial medical article of claim 1, wherein the ratio is
2 1:1.

1 3. The antimicrobial medical article of claim 1, wherein the solvent is
2 selected from the group consisting of water, alcohol, tetrahydrofuran, dimethylsulfoxide,
3 dimethylformamide, N-methyl-2-pyrrolidone, and mixtures thereof.

1 4. The antimicrobial medical article of claim 3, wherein the solvent is
2 a mixture of between 10 and 30 percent (volume/volume) tetrahydrofuran and 70 and 90
3 percent (volume/volume) ethanol.

1 5. The antimicrobial medical article of claim 7, wherein the solvent is
2 a mixture of 20 percent (volume/volume) tetrahydrofuran and 80 percent
3 (volume/volume) ethanol.

1 6. The antimicrobial medical article of claim 3, wherein the solvent is
2 a mixture of between 75 and 95 percent (volume/volume) tetrahydrofuran and 5 and 25
3 percent (volume/volume) methanol.

1 7. The antimicrobial medical article of claim 6, wherein the solvent is
2 a mixture of about 85 percent (volume/volume) tetrahydrofuran and 15 percent
3 (volume/volume) methanol.

1 8. The antimicrobial medical article of claim 1, wherein the article is
2 a hydrophilic polymeric medical article.

1 9. The antimicrobial medical article of claim 8, wherein the article is
2 a catheter.

1 10. The catheter of claim 9, wherein the catheter has a lumen which is
2 treated, for an effective period of time, with the solution consisting essentially of one or
3 more solvents and the mixture of chlorhexidine free base and water-soluble chlorhexidine
4 salt.

1 11. The medical article of claim 8, wherein the water-soluble
2 chlorhexidine salt is chlorhexidine diacetate.

1 12. The catheter of claim 9, wherein the water-soluble chlorhexidine
2 salt is chlorhexidine diacetate.

1 13. The catheter of claim 10, wherein the water-soluble chlorhexidine
2 salt is chlorhexidine diacetate.

1 14. The antimicrobial medical article of claim 1, wherein the article is
2 a hydrophobic polymeric medical article.

1 15. The antimicrobial medical article of claim 14, wherein the article is
2 expanded polytetrafluoroethylene.

3 16. The antimicrobial medical article of claim 14, wherein the article is
4 a polytetrafluoroethylene soft tissue patch.

1 17. An antimicrobial medical article prepared by treating a polymeric
2 medical article, for an effective period of time, with a solution consisting essentially of

3 (1) one or more solvents;

4 (2) a mixture of chlorhexidine free base and a water-soluble chlorhexidine
5 salt; and

6 (3) one or more of (i) an organic acid, at a concentration of between 0.1
7 and 5 percent; (ii) an anti-inflammatory agent, at a concentration of between 0.1 and 5
8 percent; or (iii) a hydrogel at a concentration of between 0.5 to 10 percent,

9 wherein the weight/weight ratio of chlorhexidine free base and the water-
10 soluble chlorhexidine salt in the solution is between 1:1 to 1:5.

1 18. The antimicrobial medical article of claim 17, wherein the
2 concentration of organic acid in the solution is between 0.1 and 2 percent.

1 19. The antimicrobial medical article of claim 17, wherein the
2 concentration of anti-inflammatory agent is between 0.1 and 1 percent.

1 20. The antimicrobial medical article of claim 17, wherein the
2 concentration of hydrogel in the solution is between 1 and 5 percent.

1 21. A method of preparing a medical article comprising the steps of
2 (i) placing the medical article in a solution consisting essentially of
3 (a) a solvent selected from the group consisting of water, reagent alcohol,
4 tetrahydrofuran, dimethylsulfoxide, dimethylformamide, N-methyl-2-pyrrolidone, and
5 mixtures thereof; and (b) a mixture of chlorhexidine free base and a water-soluble
6 chlorhexidine salt, wherein the weight/weight ratio of chlorhexidine free base and water-
7 soluble chlorhexidine salt in the solution is between 1:1 to 1:5;
8 (ii) soaking the medical article in the solution for an effective
9 period of time to allow the medical article to swell;
10 (iii) removing the medical article from the solution; and

1 (iv) drying the medical article.

1 22. A method of preparing a catheter having a lumen comprising the

2 steps of

3 (i) exposing the lumen of the catheter to a solution consisting
4 essentially of (a) a solvent selected from the group consisting of water, reagent alcohol,
5 tetrahydrofuran, dimethylsulfoxide, dimethylformamide, N-methyl-2-pyrrolidone, and
6 mixtures thereof; and (b) a mixture of chlorhexidine free base and a water-soluble
7 chlorhexidine salt, wherein the weight/weight ratio of chlorhexidine free base and water-
8 soluble chlorhexidine salt in the solution is between 1:1 to 1:5;

9 (ii) filling the lumen of the catheter with the solution for an
10 effective period of time to allow the lumen of the catheter to swell;

11 (iii) removing the solution from the lumen of the catheter; and

12 (iv) drying the catheter.

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